timely filed and fully responsive to the Office Action.

Claims 1-76 were pending in the present application prior to the aforementioned amendment. By the above amendments, claims 1, 19 and 45 are amended. Applicant submits that no issue of new matter has been set forth by this Amendment. Accordingly, claims 1-76 are still pending in the subject application and are believed to be in condition for allowance at least for the reasons advanced hereinbelow.

35 U.S.C. §102 Rejection

The Office Action rejects claims 1-76 pursuant to 35 U.S.C. §102(e) as anticipated by ***Sumiyoshi et al. '134A***. Applicant respectfully traverses the grounds for rejection at least for the following reasons.

The claimed invention is directed generally to a semiconductor device including, *inter alia*, a thin film transistor comprising a polycrystalline semiconductor layer having source, drain and channel regions, a gate insulating layer adjacent to the channel region, a gate electrode adjacent to the channel region, an interlayer insulating film comprising an inorganic material formed on the thin film transistor, and an organic resin film provided over the interlayer insulating film. In accordance with at least independent claims 1, 10, 19, 32, 45 and 68, the polycrystalline semiconductor layer exhibits a peak of Raman spectra, displaced from a peak of single crystalline silicon to the lower frequency direction and the polycrystalline semiconductor layer is formed by crystallizing an amorphous semiconductor layer.

Initially, Applicant submits that the findings of the Examiner in the Office Action of February 28, 2001 appear to conflict with the findings expressed by the Examiner in the Office Action of October 18, 2001. More particularly, Applicant finds it puzzling how the Examiner's findings in the October 18, 2001 Office Action express that ***Sumiyoshi et al. '134A*** teaches every feature of the claimed invention necessary to support a finding of anticipation under §102 when the earlier February 28, 2001 Office

Action states that the teachings of ***Sumiyoshi et al. '134A*** are sufficient to only support *prima facie* obviousness under §103. For instance, on page 3 of the February 28, 2001 Office Action, the Examiner admitted that ***Sumiyoshi et al. '134A*** is deficient for failing to disclose "the polysilicon layer semiconductor layer exhibiting a peak displaced to the lower frequency direction." Accordingly, a secondary reference, ***Ohmura '937***, was relied upon since it allegedly disclosed a crystalline silicon layer displaced to a lower frequency direction (518 cm^{-1}). Applicant apparently successfully rebutted this finding in contending that ***Ohmura '937*** did not properly modify ***Sumiyoshi et al. '134A*** since the Raman peak in ***Ohmura '937*** is only applied to single crystalline silicon.

Accordingly, on page 2 of the October 18, 2001 Office Action, the Examiner apparently finds again that ***Sumiyoshi et al. '134A*** fails to teach "the polysilicon layer semiconductor layer exhibiting a peak displaced to the lower frequency direction." The Examiner finds, however, that it is "inherent that polysilicon semiconductor layer exhibits a peak of Raman spectra." If such a feature was of such a notorious nature, why did the Examiner not come to this conclusion in the February 28, 2001 Office Action?

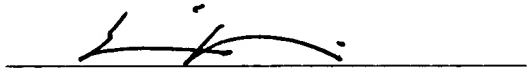
Moreover, regarding the Examiner's citation of ***Gyoda '616 B1*** to support the contention that the polysilicon layer semiconductor layer exhibiting a peak displaced to the lower frequency direction is inherent, Applicant contends that inasmuch as ***Gyoda '616 B1*** has an effective filing date (February 9, 1999) which is subsequent to the effective filing date (March 22, 1991) of the subject application, ***Gyoda '616 B1*** is inapplicable as prior art. Accordingly, Applicant contends that such a feature was not inherent in the art at the time of invention as evidenced by ***Gyoda '616 B1*** since the device disclosed in ***Gyoda '616 B1*** was made after the claimed invention. Applicant thereby requests that the Office either present evidence of such inherency during the next communication or withdraw the rejection.

Even assuming, *arguendo*, that the feature of the polycrystalline semiconductor layer exhibiting a peak of Raman spectra was inherent at the time of Applicant's

invention, it is contended that the teachings of ***Sumiyoshi et al. '134A*** still fail to support a finding of anticipation under §102 since ***Sumiyoshi et al. '134A*** fails to expressly teach or inherently suggest a semiconductor device wherein the polycrystalline semiconductor layer is formed by crystallizing an amorphous semiconductor layer, as recited in the claimed invention. ***Sumiyoshi et al. '134A*** merely discloses on page 7, lines 14 and 15 (English translation) that the polycrystalline semiconductor layer is formed by a chemical vapor deposition (CVD) method. Accordingly, since ***Sumiyoshi et al. '134A*** fails to teach every claimed feature of the present invention, it is contended that the claimed invention is patentably distinct therefrom. Reconsideration and withdrawal of the rejection is earnestly solicited.

Accordingly, Applicant respectfully contends that the claimed invention is directed to subject matter which is patentably distinct over the prior art and also submit that the pending claims are in proper condition for allowance and reconsideration and withdrawal of the pending rejection is requested. If the Examiner believes further discussions with Applicants representative would be beneficial in this case, he is invited to contact the undersigned.

Respectfully submitted,



Eric J. Robinson
Reg. No. 38,285
NIXON PEABODY LLP
8180 Greensboro Drive, Suite 800
McLean, Virginia 22102
(703) 790-9110

EJR/TAV

MARKED-UP COPY OF AMENDED CLAIMS

1. (Thrice Amended) A semiconductor device comprising:

a first substrate having an insulating surface;

a second substrate opposing said first substrate;

at least one thin film transistor formed on said insulating surface, said thin film transistor having a polycrystalline semiconductor layer comprising source, drain and channel regions;

an interlayer insulating film comprising an inorganic material formed on said thin film transistor;

an organic resin film provided over said interlayer insulating film; and

a pixel electrode formed over said organic resin film and connected to said thin film transistor through an opening provided in said organic resin film,

wherein said polycrystalline semiconductor layer exhibits a peak of Raman spectra, displaced from a peak of single crystalline silicon to the lower frequency direction, and

wherein said polycrystalline semiconductor layer is formed by crystallizing an amorphous semiconductor layer.

19. (Thrice Amended) A semiconductor device comprising:

a first substrate having an insulating surface;

a second substrate opposing said first substrate;

at least one thin film transistor formed on said insulating surface, said thin film transistor comprising:

a polycrystalline semiconductor layer having source, drain and channel regions;

a gate insulating layer adjacent to said channel region; and

a gate electrode adjacent to said channel region;

an interlayer insulating film comprising an inorganic material formed on said thin film transistor; and

an organic resin film provided over said interlayer insulating film;

wherein said polycrystalline semiconductor layer exhibits a peak of Raman spectra, displaced from a peak of single crystalline silicon to the lower frequency direction, and

wherein said polycrystalline semiconductor layer is formed by crystallizing an amorphous semiconductor layer.

45. (Thrice Amended) A semiconductor device comprising:

a first substrate having an insulating surface;

a second substrate opposing said first substrate;

at least an n-channel thin film transistor and at least a p-channel thin film transistor both formed over said first substrate, each of said n-channel and p-channel thin film transistors comprising:

a polycrystalline semiconductor layer having source, drain and channel regions;

a gate insulating layer adjacent to said channel region; and

a gate electrode adjacent to said channel region;

an interlayer insulating film comprising an inorganic material formed on said thin film transistor; and

an organic resin film provided over said interlayer insulating film;

wherein said polycrystalline semiconductor layer exhibits a peak of Raman spectra, displaced from a peak of single crystalline silicon to the lower frequency direction, and

wherein said polycrystalline semiconductor layer is formed by crystallizing an amorphous semiconductor layer.